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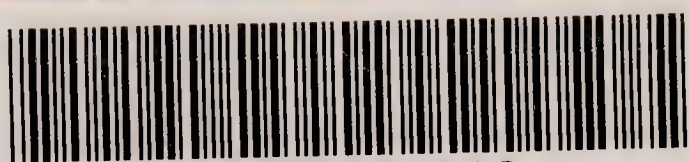
Bechuanaland Protectorate Government



Annual Medical and Sanitary Report for the year 1954



Office of the Director of Medical Services, MAFEKING



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Bechuanaland Protectorate Government



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ANNUAL MEDICAL AND SANITARY REPORT

for the year 1954

SECTION I — ADMINISTRATION

1. STAFF

Senior Service

- Director of Medical Services.
- 1 Medical Officer of Health.
- 11 Medical Officers.
- 3 Health Inspectors.
- 4 Matrons.
- 10 Nursing Sisters.
- 1 Nursing Sister (District).
- 1 Housekeeper.
- 2 Clerks.
- 1 Storeman.
- 2 Lady Clerks.
- 2 Rodent Officers.

Junior Service

- 5 Health Assistants.
- 19 Dispensers.
- 1 Microscopist.
- 1 Senior Sanitary Inspector.
- 5 Sanitary Inspectors.
- 2 Pupil Sanitary Inspectors.
- 4 Learner Rodent Assistants.
- 17 Medical Orderlies.
- 23 Staff Nurses.
- 27 Probationer Nurses.
- 4 Male Attendants (Mental Home).
- 3 Female Attendants (Mental Home).
- 7 Cooks.
- 5 Clerks.
- 7 Drivers.
- 7 Lorry Labourers.
- 4 Kitchen Helps.
- 5 Gardener/Messengers.
- 6 Labourers.
- 17 Launderers.
- 4 Sewing Women.
- 22 Housemaids.

2. The Director of Medical Services was absent on study leave for 11 months of the year. Dr. B. T. Squires acted as Director of Medical Services during his absence.

3. The staff position was again unsatisfactory during 1954. The post of Medical Officer at Gaberones was not filled until July; from September until December there was only one Medical Officer at Francistown, and for the greater part of the year only one Medical Officer at Lobatsi.

4. One Medical Officer's post and the post of Medical Officer of Health were not filled during the year.

5. One Medical Officer resigned and two were appointed on probation.

6. With regard to Nursing Sisters the position was easier than during 1953 until December when two Sisters became ill. One Sister was appointed on probation and one proceeded on overseas leave.

7. The post of Housekeeper was not filled permanently during the year.

8. **Staff Changes**

Dr. H. F. Morton appointed on probation—May 1954.

Dr. D. W. G. King appointed on probation—December 1954.

Dr. J. F. Quantrill resigned—31.8.54.

Mrs J. Ford appointed Nursing Sister on probation—11.10.54.

Mr. W. K. P. Smith appointed Health Inspector on probation—1.7.54.

Rodent Inspector T. Burger resigned—4.11.54.

Health Inspector S. F. Kotze—deceased.

VISITS

9. Dr. D. R. Thomson, Tuberculosis Consultant to the World Health Organisation, paid a visit to the Territory in January.

10. Mr. K. Borch, United Nations International Childrens' Emergency Fund regional representative for Africa, visited Mafeking in July in connection with the Extra-Venereal Treponematosi project being undertaken by Government in conjunction with World Health Organisation, United Nations International Childrens' Emergency Fund and the South African Institute for Medical Research. Future UNICEF-assisted projects were also discussed.

11. Mr. M. J. Lebeuf, a sociologist of the World Health Organisation, visited the Territory in November for two weeks.

12. Dr. F. Zumpt, Senior Entomologist of the South African Institute for Medical Research, arrived in the Territory in December to carry out an arthropod survey.

13. The Director of Medical Services, while on study leave, attended the fourth session of the Africa Regional Committee of World Health Organisation at Leopoldville, Belgian Congo, in September.

LEGISLATION

14. Government Notice No. 24 of 1954: Regulations for the Prevention of the Spread of Yellow Fever.

15. Proclamation No. 38 of 1954: Bechuanaland Protectorate Inquests Proclamation.

16. Government Notice No. 41 of 1954: Regulations for Inspection of Meat and Control of Public Abattoirs and Export Slaughter Houses.

17. Proclamation No. 48 of 1954: Opium and Habit-Forming Drugs: Amendment to the Opium and Habit-Forming Drugs Proclamation (Cap. 43 of the Laws).

SECTION II — PUBLIC HEALTH

BILHARZIASIS

18. 57 (40)* cases were diagnosed, of which 8 were sufficiently severe to warrant hospital treatment. 30 (25) of these patients were from the Bakgatla Reserve where the disease is endemic. All were infections with *S. haematobium*.

DIPHTHERIA

19. The total number of cases notified was 132 (166) with 16 (16) deaths. There were no extensive epidemics during the year; small outbreaks were recorded mainly from the Serowe district where 54 (39) cases were diagnosed, and from the Molepolole, Lobatsi and Francistown areas.

20. The distribution of cases is given in Table I.

TABLE I

<i>District</i>					<i>Cases</i>	
Francistown	...	...	...	...	26	(11)
Gaberones	...	...	...	...	5	(1)
Kanye	...	...	...	...	3	(2)
Lobatsi	...	...	...	...	12	(6)
Mafeking (headquarters)	...	...	...	...	—	(1)
Mahalapye	...	...	...	...	10	(47)
Maun and Ghanzi	...	...	...	...	—	(35)
Mochudi	...	...	...	...	5	(2)
Molepolole	...	...	...	...	12	(21)
Ramoutsa	...	...	...	...	5	(1)
Serowe	...	...	...	...	54	(39)
					<hr/> 132	<hr/> (166)

There were 16 (16) deaths.

21. 11,987 prophylactic inoculations were given during the year.

DYSENTERY

22. 1,103 (1,022) cases were notified of which 370 (552) were bacillary, 125 (129) amoebic and 608 (321) unspecified.

LEPROSY

23. 19 (30) cases were reported of whom 16 (30) were in Ngamiland, 2 in Serowe district and 1 (an Indian woman) from Ramoutsa. Other than in Ngamiland, where even there no more than about 50 lepers are known to exist, this disease is fortunately not a problem in this Territory, only occasional and isolated cases occurring.

MALARIA

24. 1,472 (1,865) cases were reported; no epidemics occurred during the year.

25. Routine spraying was continued at Maun with D.D.T. M25 emulsion. As the floodwater in 1954 rose to a level unsurpassed since 1925, extra labourers were employed in the spraying gangs. No increase in the number of mosquitoes was noted.

*Figures in brackets where given show comparable figures for 1953.

26. Quarterly spraying of all African huts within the controlled area at Maun with 1/8 M25 solution has been continued, as was quarterly spraying of all brick houses, European and African, with 5% DDT in kerosene. Spraying of houses was discontinued during the winter months. This spraying consumed 345 gallons of M25 and 717 gallons of 5% DDT.

27. In Francistown too routine spraying was carried out throughout the year. Paludrine was issued as a prophylactic measure to all African schools in the Bokalaka and Tati areas. An increase in the school attendance was noted.

28. The distribution of cases is given in Table II.

TABLE II

<i>District</i>					<i>Cases</i>	
Francistown	...	...	...	...	315	(415)
Gaberones	...	...	...	...	10	(13)
Kanye	...	...	...	...	16	(22)
Kazangula (not reported)	...	...	...	...	—	(312)
Lobatsi	...	...	...	...	8	(1)
Mahalapye	...	...	...	...	17	(19)
Mochudi	...	...	...	...	23	(14)
Molepolole	...	...	...	...	120	(102)
Ngamiland	...	...	...	...	807	(563)
Serowe	...	...	...	...	156	(404)
					<u>1,472</u>	<u>(1,865)</u>

29. There were 3 (3) deaths.

30. The inter-territorial agreement with the Union Health Department regarding control measures on both sides of the border along the Crocodile and Molopo Rivers remained in force.

MALNUTRITION AND DEFICIENCY STATES

31. The total number of cases of deficiency disease reported was 3,177 (1,682) although the rainfall of 1954 was generally good. Of these cases 33 were diagnosed as beri-beri, 94 as pellagra, 364 as scurvy and the remainder, 2,686, as "other deficiency states".

32. It is of interest that no case of Kwashiorkor has yet been reported. The total number of cases of deficiency states is approximately 2% of the total number of first attendances as against 1.7% for 1953.

33. Owing to shortage of staff it was not possible to continue the recording of tongue patterns during 1954 as was done in 1953.

PLAGUE

34. No case of plague was reported during the year. Routine anti-plague work and surveys were seriously curtailed during the year by shortage of staff occasioned by the death of one Health Inspector and the resignation of a Rodent Officer. Further, the performance of the surveys was also hindered by failure of transport and closure of roads owing to the very high floods.

35. Rakops and Makalamabedi were visited twice; no signs of rodent mortality were seen and the rodent population appeared to be low. Similarly, two visits to the Chobe area gave no signs of rodent mortality and very few rodents.

36. A visit to Shakawe at the beginning of the year brought similar findings although it was reported that there was an apparent increase in the rodent population between Tubu Island and Tsau.

37. Ghanzi area was surveyed as far as Nojane in November. Reports were received to the effect that rodent burrows at Nojane, Kuli and Nxole were deserted and that evidence of rodent mortality had been found.

38. Again owing to the staff shortage the visits along the Molopo River had to be undertaken at short notice by the Health Inspector of Lobatsi. During the tour 741 huts were dusted with DDT.

39. It was not possible to visit the Tsane-Lehututu area.

40. Figures for the rodent surveys in the north and west are given in Table III.

TABLE III
Rodent Surveys

Number of rodents trapped	...	...	...	16
Number of fleas found on trapped rodents	...			7
Number of huts tested for presence of fleas	...			3,602
Number of fleas caught in huts	...	...		37
Number of huts treated with cyanogas	...			13
Number of rodents killed in huts	...	...		1
Number of huts dusted with DDT (10 % in talc)				20,836
Amount of DDT (10 % in talc) used	...	...		10,800 lbs.
Amount of cyanogas used	...	...	...	1 lb.
Amount of poisoned bait used (grain)...			...	28 lb.

RABIES

41. No case of human rabies was notified although 26 cases of bites, chiefly by suspected rabid dogs, were recorded.

42. Sporadic cases of canine and feline rabies occurred in the Serowe and Ngamiland districts.

43. A total of 1,671 prophylactic anti-rabies injections were given during the year to persons at risk.

RESPIRATORY DISEASES

44. 14,627 (10,256) were recorded, with 37 (20) deaths. Cases of pneumonia (all types) numbered 553 (339) with 34 (12) deaths; 25 of these deaths occurred amongst infants and children. Total mortality was 6.1 %.

SMALLPOX

45. Four isolated cases were notified, three of which came from the Molepolole area and one from Lobatsi. This latter case was considered to be one of "kaffirpox".

46. Vaccinations were repeated in the communities at risk but no wide-spread campaign was considered necessary.

47. All mine recruits continued to be vaccinated on attestation.

TRYPANOSOMIASIS

48. Only two cases of trypanosomiasis were admitted to Maun hospital during the year; both recovered. The patients, who were not Government employees, contracted the infection, so far as can be ascertained, in the Tsau-Nokaneng area. The routine method of treatment with pentamidine, suramin and tryparsamide was used.

49. All Tsetse Fly Control personnel received prophylactic treatment with pentamidine isethionate. This procedure is presently under review.

TUBERCULOSIS

50. Dr. D. R. Thomson, tuberculosis consultant to World Health Organisation, visited the Territory in January 1954. His report was not available during the year.

51. 2,278 (1,579) cases sought treatment during the year, an increase of roughly 50% on the 1953 figures.

52. Available accommodation for these cases has been severely strained during the year and it is evident that further accommodation must be provided as a matter of urgency.

53. The distribution of cases in the various areas is given in Table IV.

TABLE IV

<i>District</i>				<i>Cases</i>	
Chobe (not reported) ...	...	...	...	—	(26)
Gaberones ...	...	...	...	37	(4)
Francistown ...	...	...	...	241	(130)
Kanye ...	...	...	...	459	(367)
Kazungula (not reported) ...	...	...	...	—	(3)
Khale ...	...	...	...	125	— (not reported)
Lobatsi ...	...	...	...	337	(196)
Mafeking ...	...	...	...	9	(5)
Mahalapye ...	...	...	...	63	(34)
Maun ...	...	...	...	83	(91)
Mochudi ...	...	...	...	51	(26)
Molepolole ...	...	...	...	293	(205)
Ramoutsa ...	...	...	...	286	(281)
Serowe ...	...	...	...	294	(211)
				<u>2,278</u>	<u>(1,579)</u>

54. The number of deaths was 32 (31).

55. Of the cases recorded respiratory tuberculosis accounted for 1,629 (1,188) cases, glandular and miscellaneous tubercular infection for 349 (394), bone and joint tuberculosis for 185 (133), tuberculosis of peritoneum and intestines 100 (57) and tuberculosis of the meninges and central nervous system for 15 (7).

VENEREAL DISEASES

56. 13,516 (11,269) cases were diagnosed. Syphilis and Gonorrhoea accounted for 13,442 (11,227), lymphogranuloma venereum for 34 (42) and granuloma inguinale for 48 (—). 2 (1) cases of general paralysis of the insane were recorded.

YELLOW FEVER

57. No further investigations on yellow fever were carried out during the year.
58. Samples of blood from 49 African school-children at Francistown were submitted for the mouse protection test; all were negative. This was in continuation of an annual survey to determine whether any immunity against yellow fever was developing in the permanent population there.
59. 994 yellow fever international inoculation certificates were issued during the year.

MISCELLANEOUS INFECTIOUS AND CONTAGIOUS DISEASES

60. The recorded incidence of these disorders is given in Table V.

TABLE V

<i>Diseases</i>	<i>Cases</i>	<i>Deaths</i>
Acute anterior poliomyelitis	2 (4)	—
Measles	694 (575)	—
Meningococcal Infections	44 (28)	7 (—)
Pertussis	1,302 (1,006)	5 (2)
Scarlet Fever	2 (—)	—
Typhoid and Paratyphoid Fever	7 (9)	1 (—)
Varicella	176 (138)	—

SECTION III — VITAL STATISTICS

61. The last available census figures of 1946 are given below:—

TABLE VI

Europeans	2,379
Africans	292,755
Asiatics	94
Coloured	1,082
	<u>296,310</u>

This total corresponds with a population density of just over 1 per square mile.

TABLE VII

European Birth Rates and Death Rates

Total European births	51
Births per 1,000	20.1
Total European deaths	16
Deaths per 1,000	6.4
Deaths under 1 year of age	Nil.

TABLE VIII

Causes of European Deaths

Malignant Neoplasms	4
Cardiac disease	6
Pneumonia and other bronchopulmonary diseases	1
Diphtheria	1
Meningitis	1
Tuberculosis	2
Fracture of skull (accidental)	1

ILLNESS OF OFFICIALS

62. Causes of morbidity amongst European and African Government officials who were off duty for more than 14 days are given in Tables IX and X. There are 376 European and 1,233 African officials employed in Government Service.

TABLE IX
Europeans

Injury ...	...	...	...	...	...	...	1
Angina Pectoris	...	...	...	...	...	...	2
Paroxysmal Tachycardia	...	...	...	...	...	...	1
Jaundice	...	...	...	...	...	...	1
Abortion	...	...	...	...	...	...	1
Asthma	...	...	...	...	...	...	1
Influenza	...	...	...	...	...	...	2
Enteritis	...	...	...	...	...	...	1
Urticaria	...	...	...	...	...	...	1
Malaria	...	...	...	...	...	...	1
Osteoarthritis	...	...	...	...	...	...	1

TABLE X
Africans

Appendicitis ...	...	...	...	...	...	...	2
Febricular	...	...	...	...	...	...	3
Synovitis	...	...	...	...	...	...	1
Malnutrition	...	...	...	...	...	...	1
Injuries and accidents	...	...	...	...	...	...	6
Phlebitis	...	...	...	...	...	...	2
Hernia...	...	...	...	...	...	...	1
Pleurisy	...	...	...	...	...	...	1
Tonsillitis	...	...	...	...	...	...	1
Influenza	...	...	...	...	...	...	1
Pneumonia	...	...	...	...	...	...	2
Tuberculosis	...	...	...	...	...	...	3
Meningitis	...	...	...	...	...	...	1
Arthritis	...	...	...	...	...	...	1
Mental Derangement	...	...	...	...	...	...	1
Hyperpiesis	...	...	...	...	...	...	1
Typhoid Fever	...	...	...	...	...	...	1

63. There were 2 deaths; 1 European and 1 African.

SECTION IV — HYGIENE AND SANITATION

MATERNITY AND CHILD WELFARE

64. Figures for 1954 are given in Table XI.

TABLE XI

Number of deliveries in hospital ...	1,847	(1,352)
Accidents and complications of pregnancy including abortions ...	573	(345)
Ante-natal attendances (12 centres)	16,895	(7,126)
Post-natal attendances ...	2,589	(216)

65. Maun Maternity Centre has been enlarged by the addition of a new wing which includes an 8-bed ward, a nursery of 10 cots, sluice room, bathroom, lavatory and a duty room.

66. Ante-natal clinics have been developed extensively during the year, and child welfare clinics are now established at 3 centres as against 1 in 1953. Post-natal clinics are, however, difficult to establish as Tribal Law and Custom ordain a long period of hibernation for the mother in the post-puerperal period.

NATIVE LABOUR RECRUITMENT

67. The numbers dropped somewhat during 1954, 30,535 (37,488) passing through the various depots. 10,275 recruits passed through Francistown in transit from other centres. Distribution is given in Table XII.

TABLE XII

<i>Station</i>	<i>Total No.</i>	<i>Rejects</i>
Francistown	187	10
Gaberones	1,409	22
Kanye	2,105	51
Lobatsi	3,487	113
Mahalapye	1,273	97
Maun	741	38
Mochudi	323	5
Molepolole	2,715	163
Ramathlabama (Mafeking) ...	440	5
Serowe	3,465	133
Shakawe	4,115	60
W.N.L.A. (Road and Airlift)	10,275	—
	<u>30,535</u>	<u>697</u>

TRANSPORT OF RECRUITS BY WITWATERSRAND NATIVE LABOUR ASSOCIATION AIR LIFT

68. The airlift continued to function successfully during the year. 10,275 recruits and repatriates were transported from and to Shakawe, Lilongwe and Barotseland, of whom 8,898 travelled by air.

69. The total number of miles flown was 1,190,319. There were no accidents.

PRISONS AND ASYLUMS

70. The two gaols at Gaberones and Francistown normally cater for long-term prisoners, short-term cases being accommodated in "lock-ups" at the district headquarters. A separate European block has been erected at Lobatsi.

General Health of the Prisoners

71. General health was good and no epidemics were recorded. A few cases of malnutrition were diagnosed in newly-admitted prisoners. Isolated cases of venereal disease were also recorded.

72. Cases admitted to hospital numbered 49 in all (Lobatsi 14, Maun 13, Francistown 7, Serowe 6, Kanye 9). There were 2 deaths.

Diet

73. The dietary scale introduced in 1952 has continued to prove satisfactory.

Facilities for Medical Inspection and Treatment

74. Regular weekly gaol inspections are held where a medical officer is available. At these inspections all complaints are investigated. Prisoners may also report to the dispensary at times other than those of the routine inspections.

Hospital Admissions

75.				<i>Cases</i>	<i>Deaths</i>
	Lobatsi	...	...	14	—
	Maun ...	...	...	13	1
	Francistown	...	...	7	1
	Serowe	...	...	6	—
	Kanye	...	...	9	—
				—	—
				49	2
				==	==

Sanitation

76. Lobatsi is still the only gaol where water-borne sanitation is provided. Otherwise, save at Ghanzi and Kasane, where pit privies are employed, the bucket system of nightsoil disposal is still in use.

Asylum

77. The asylum, despite being enlarged to twice its former size—there being provision for 24 patients—was fully occupied throughout the year. The inmates can now amble outside the building every day; this innovation has produced a marked improvement in their health. Most of the ground now enclosed by fencing has been turned into a garden which is tended by the inmates.

78. During the year 11 patients were admitted, one was discharged, one died and one was transferred to the Ingutsheni Mental Home in Southern Rhodesia. The Colony continued to accept from this Territory mental patients who were dangerous or who were likely to benefit from modern institutional treatment.

MEAT INSPECTIONS

79.					
				<i>TABLE XIII</i>	
				<i>Number slaughtered and inspected</i>	
				<i>Bovines</i>	<i>Sheep and Pigs</i>
					<i>Goats</i>
	Francistown	...	...	832	367 52
	Lobatsi	...	...	457	1,962 57
	Maun ...	...	...	536	540 8
				—	—
	TOTALS	...	...	1,825	2,869 117
				==	==

80. Condemnations and nature thereof are given in Table XIV.

TABLE XIV
Condemnations, either total or partial

				<i>Bovines</i>	<i>Sheep and Goats</i>	<i>Pigs</i>
Lobatsi						
Stilesia	...	...	...	—	1,304	—
Pericarditis	...	...	...	4	—	—
Echinococcus Cysts	...	...	...	12	9	—
Abscesses	...	...	...	21	2	—
Measles	...	...	...	57	—	—
Pyæmia	...	...	...	1	1	—
Actinomycosis	...	...	...	4	—	—
Inflammation	...	...	...	1	1	—
Bacterial Necrosis	...	...	...	2	—	—
Strongyli	...	...	...	1	—	—
Strogylus Rufescens	...	...	...	—	3	—
Mastitis	...	...	...	6	—	—
Nephritis	...	...	...	3	—	—
Presternal Calcification	...	...	...	1	—	—
Caeseous Lymphadenitis	...	...	...	—	21	—
Cysticercus Tenuicollis	...	...	...	—	2	—
Uraemia	...	...	...	—	1	—
Pleurisy	...	...	...	—	1	—
Maun						
Stilesia hepatica	...	...	...	—	53	—
Flukes	...	...	...	174	50	—
Pericarditis	...	...	...	—	1	—
Echinococcus cysts	...	...	...	1	—	—
Abscesses	...	...	...	3	1	—
Measles	...	...	...	4	—	—
Francistown						
Cysticercus Cellulosæ	...	...	...	—	—	2
Cysticercus bovis	...	...	...	10	—	—
Septicæmia	...	...	...	5	—	—
Emaciation	...	...	...	1	4	—
Sarcosporidiosis generalised	...	...	...	8	—	—
Mastitis	...	...	...	1	—	—
Putrefaction	...	...	...	2	—	—
Extensive bruising	...	...	...	4	—	—
Abscesses	...	...	...	19	3	—
Fatty infiltration	...	...	...	2	—	—

				<i>Bovines</i>	<i>Sheep and Goats</i>	<i>Pigs</i>
Telangiectasis...	...	...	4	—	—	—
Hepatitis	...	...	25	2	—	—
Echinococcus	...	...	7	—	—	—
Pneumonia	...	...	39	5	—	—
Splenitis	...	...	2	—	—	—
Haematoma	...	...	1	—	—	—
Pericarditis	...	...	3	—	—	—
Myocarditis	...	...	2	—	—	—
Enteritis	...	...	2	—	—	—
Pimply gut	...	...	4	71	—	—
Mammitis	...	...	5	—	—	—
Actinomycosis	...	...	2	—	—	—
Stilesia	...	...	—	163	—	—
Necrosis	...	...	—	2	—	—
Fibrosis	...	...	—	1	—	—

NEW HOUSING

81. The following new houses for Europeans were erected by the Public Works Department during the year:—

Francistown	...	...	2
Ghanzi	...	...	2
Kanye	...	...	1
Lobatsi	...	...	2
Ramathlabama	...	...	1
Serowe	...	...	1

82. At the Lobatsi Hospital an out-patients' room, a food utensil wash-up room and additions to the African Staff quarters were completed.

83. Accommodation for European prisoners was provided at the Lobatsi gaol.

84. Additional departmental office accommodation was provided at headquarters.

85. Eight houses for Africans were also erected.

SECTION V — HOSPITALS AND DISPENSARIES

OUT-PATIENTS

86.	TABLE XV				
First attendance	...	...	115,688	(91,432)	
Subsequent attendance	...	...	256,186	(166,257)	
TOTAL	...	...	371,874	(257,689)	

IN-PATIENTS

87. The number of admissions was 10,136 (8,526). At the end of 1954, 560 beds were available, 28 European, 462 African and 69 cots, as against 532 in 1953.

88. Leading hospital statistics are given in Table XVI.

TABLE XVI
Hospital Statistics

<i>Hospital</i>				<i>Beds</i>		<i>Cots</i>	<i>Patients</i>		<i>Operations</i>	
				<i>European</i>	<i>African</i>		<i>Admissions</i>	<i>Deaths</i>	<i>Major</i>	<i>Minor</i>
Francistown	...	...	...	6	39	7	1,766	54	9	1,404
Kanye Medical Mission	...	...	...	—	66	6	1,162	13	64	169
Kanye Moffat Hospital	...	...	...	1	26	6	576	5	38	82
Kazungula	...	...	...	—	6	—	—	—	—	—
Khale (Roman Catholic Mission)	...	...	...	—	5	—	55	—	—	—
Lobatsi (including Mental Home)	...	...	...	11	115	6	1,500	29	239	172
Mahalapye	...	...	...	—	8	1	121	6	—	136
Maun	...	...	...	5	31	2	626	29	8	219
Maun Maternity Centre	...	...	...	—	12	—	130	6	—	—
Mochudi	...	...	...	—	18	3	398	12	2	47
Molepolole	...	...	...	—	45	11	1,078	13	14	235
Ramoutsa (Hermansberg Mission)	...	...	...	—	13	—	134	—	—	—
Serowe	...	...	...	5	79	27	2,324	87	149	188
Gaberones	...	...	...	—	—	—	—	—	—	106
TOTALS	...	...	...	28	463	69	9,870	254	523	2,758

DISPENSARIES

89. No new dispensaries were opened during the year. A resident dispenser from the Kanye Medical Mission was posted to Tsane which hitherto had been visited periodically. Tsane is so far from the nearest medical station that a resident dispenser there is a necessity if any real curative work is to be done.

90. Tonota dispensary was not opened during the year. Building renovations are expected to be completed there shortly when the Unit will be re-opened in charge of an African Dispenser.

91. The Dispenser at Shakawe visited Sepopa as often as possible and Seronga when barge transport was available.

92. Rakops dispensary, in charge of an African Health Assistant, was visited by the Medical Officer, Serowe, during the latter part of the year when floods made the periodical visit from Maun impossible.

93. Kalkfontein dispensary, opened last year, has fulfilled a real need. The dispenser has also made trips to Ghanzi, Makunda and Nojane when transport was available.

94. Visits to Palla Ranch by the Medical Officer, Mahalapye, were discontinued during the latter part of the year. The numbers at Dikgathlong increased considerably and visits there were continued.

95. Prefabricated dispensary units were erected at Shoshong, Gabane and Molepolole and replaced inadequate or unsuitable structures.

SECTION VI — MISCELLANEOUS

COLONIAL DEVELOPMENT CORPORATION

96. The abattoir at Lobatsi was opened officially on 11th October after several postponements due to structural alterations.

97. The employees at present consist of 26 European and nearly 300 Africans.

98. Up to the end of the year 9,588 slaughter carcasses had been processed.

99. There has been a reduction in both European and African staff at Matetsi. An African location has been built and appears to be satisfactory. No permanent dispensary building has yet been erected.

NURSING EXAMINATIONS

100.		<i>No. of Candidates</i>	<i>No. Passed</i>	<i>No. Failed</i>
	Preliminary Examinations ...	51	46	5
	Final Examinations... ..	14	10	4
	Final Midwifery Examinations ...	4	3	1

101. There were in all 3 passes with honours and 14 passes with merit.

102. Following deliberation at a meeting of the Executive Nursing Committee, a departure from routine was made this year in the method of conducting the practical examinations. In previous years practical examinations have been carried out at the examination centre. Allegations were made that the candidates were nervous and not at their best in strange surroundings. This year, therefore, arrangements were made for the candidates to take the practical examination in their own hospital amid familiar surroundings. The sister-in-charge of the hospital acted as internal examiner whilst a sister from another hospital acted as external examiner.

PUBLICATIONS

103. Squires, B. T.: Ultra-violet Fluorescence of the Tongue, B.M.J., 1954, ii, 1106.

COLONIAL DEVELOPMENT AND WELFARE FUND SCHEMES

104. Funds from Colonial Development Fund Scheme D.1037 will be exhausted and the scheme will close at the end of the 1955/56 financial year. Apart from the purchase of ambulances, the only major project yet to be completed is the construction of a new Health Centre at Gaberones with accommodation for 6 in-patients at an estimated cost of £5,500.

105. As to Scheme D.2014, part of the funds diverted during 1953 have been used in maintenance of skeleton staff for the Extra-Venereal Treponematosi project. It was not possible for Government to recruit a Medical Officer for secondment to the Scheme in terms of the agreement drawn up with World Health Organisation. Every effort continues to be made to do so.

HABIT-FORMING DRUGS

106. Import certificates numbering 8 were issued during 1954.

107. The following habit-forming drugs were imported during the year:—

Morphine	...	...	grammes 358.246
Cocaine	...	...	grammes 87.7
Indian Hemp	...	...	grammes 44.9
Pethidine	...	...	grammes 149.607

GOVERNOR-GENERAL'S NATIONAL WAR FUND

108. There were no new grants during the year. Most Mission Hospitals in receipt of grants completed the work in hand and very little money was still outstanding at the end of the year.

EXTRA-VENEREAL TREPONEMATOSIS

109. The broad plan of this project, sponsored jointly by the World Health Organisation, United Nations International Children's Emergency Fund, the South African Institute for Medical Research and the Bechuanaland Protectorate Government was outlined in the 1953 Report. The Scheme has now been functioning for over 13 months during which period work has been confined to the Bakwena Reserve which was adopted as an experimental pilot area. This is an area of some 10,000 square miles with a population, as far as can be ascertained, of 40,000 people. During the past year over 36,000 persons in this area were investigated and a blood sample from a high proportion of the populace was taken. Details of each person seen were entered on a punched filing card and missing members of the family unit were also noted on the card. In this pilot area cases and contacts were treated as they were found and a detailed assessment as regards their response to treatment is now being made. Much of the laboratory work was done at the laboratory set up by the South African Institute for Medical Research at Molepolole.

110. In the mass treatment campaign throughout the Territory which is now being organised and which is due to commence in July 1955, intensive serological investigations will not be required; the main aim will be to find and treat all infectious cases and their contacts.

111. Hitherto the project has been most enthusiastically received by the people. No obstacles have been placed in the path of the team; on the other hand every possible co-operation has been forthcoming from the Chiefs down. The only social obstacle encountered and likely to play a major role in the mass treatment campaign is the continual migrating habits of the people with its consequent splitting of families and the difficulties resulting therefrom. As this is an integral part of the life of the people, no method of overcoming it entirely can be foreseen.

112. This project is likely also to yield considerable invaluable scientific information. The spirochaete has been successfully transmitted to hamsters and is now available in Boston, United States of America, for comparison with other strains. Various surveys have also been made on batches of sera to determine the incidence of other infectious diseases. Changes in lipoprotein contents of the sera which could conceivably be associated with the high seropositivity rate of 30% have also been determined. These latter studies are being pursued by biochemical and electrophoretic means at the South African Institute for Medical Research.

EXTRACTS FROM DISTRICT REPORTS

113. **The Government Medical Officer, Francistown**, indicates in his report that departmental revenue increased by £434 to £1,473. In-patients accommodation was inadequate and isolation facilities, particularly for pulmonary tuberculosis, were negligible. Paludrine was issued prophylactically to all African schoolchildren in the Bokalaka and Tati areas from January to May with resultant increase in school attendances. The new Government abattoir has filled a long-felt want and is functioning satisfactorily. Water-borne sanitation was extended in the hospital, which was also re-wired for electricity

114. **The Health Inspector, Francistown,** refers to a noticeable improvement in the handling of foodstuffs. Most employers now provide their employees with protective clothing. The practice of renewing trading licences automatically each year instead of with prior reference to the Medical Department to ascertain whether any modifications are desirable, is one which merits re-consideration. This district had considerable rains and anti-malarial measures were intensified. Much attention is being paid to improving general sanitation in the location.

115. **The Medical Missionary, Moffat Hospital, Kanye,** writes that it was originally intended that the Mission's activities would be mainly in the villages throughout the Reserve. The increase in patients has, however, been mainly in Kanye and the work has therefore been equally divided between Kanye and the district. While ante-natal and maternity services have expanded very considerably, traditional customs make it difficult to institute post-natal clinics. 1,498 patients were seen at the Moshaneng Asbestos Mine which is visited weekly. The mine authorities are making a strong effort to reduce the hazards of asbestosis. Ventilation is good and mining methods are controlled by inspectors, but the mill is possibly associated with risk.

116. **The Medical Missionary, Seventh-Day Adventist Hospital, Kanye,** writes of the generous gift from the Governor General's National War Fund in the previous year which enabled the Mission to sink its own borehole. Exhaustive tests indicated that the yield was 1,000 gallons per hour. Attendances at the Tsane dispensary, erected by Government, were high and the Mission have now posted an African Dispenser to that area on a permanent basis. The Medical Missionary visits the dispensary at two-monthly intervals, the cost of such visits being borne by Government. The general state of nutrition in this part of the Territory was noted to be good.

117. **The Medical Officer, Lobatsi,** refers to the construction of a new out-patients' room in which all dressings are done, and to a number of extensions to the African staff quarters. The completion of the security fence round the Mental Home has enabled the enclosed ground to be cultivated to the benefit of the inmates and the general appearance of the institution has been greatly improved. 239 major and 172 minor operations were performed despite the fact that for the major portion of the year only one Medical Officer was posted to this station.

118. **The Health Inspector, Lobatsi,** writes of the improved methods of refuse disposal introduced in the town. The siting of refuse bins at strategic points has elicited a good response from both the European and African population in keeping the town clean. There are 162 food stores in the area of jurisdiction of the Health Inspector, and he was able to visit each store three times during the year and proffer advice on the handling of food. Many of these stores, however, are totally unsuited for the type of business carried on. Hotels were also inspected at regular intervals. 33 cases of diphtheria came to his attention and, as a result, 2,864 prophylactic inoculations were given.

119. **The Government Medical Officer, Mahalapye,** draws attention to the increasing failure on the part of the people to pay for the hire of the ambulance. With the increase in numbers attending the Dikgathlong clinic it became increasingly difficult to continue the clinic at Palla Ranch. 10 cases of diphtheria with 2 deaths were seen. The response to warnings issued to

bring children for diphtheria immunisation was disappointing. 97 of 1,273 mine recruits examined were rejected as unfit, mainly because of bronchial conditions, poor physique, venereal disease and skin conditions.

120. **The Medical Officer, Maun**, refers in his report to the completion of the building programme under Colonial Development and Welfare Fund Scheme D.1037 as a result of which accommodation for 32 African and 5 European patients is now provided. Water storage at the hospital was increased from 6,000 to 10,000 gallons. District tours were perforce curtailed because of transport difficulties and also because of severe flood conditions. Some use was made of available air transport to visit outlying centres, but such visits were of necessity restricted. Anti-plague measures were also somewhat curtailed by the floods. Only 2 cases of trypanosomiasis were admitted to hospital during the year; both recovered. Both cases apparently contracted the disease in the Tsau-Nokaneng area. Sporadic rabies occurred in the canine and feline population. 1,001 prophylactic anti-rabies inoculations were given to persons at risk. Government housing at Maun has been wired and it is intended to draw power from the Aeradio Power Station.

121. **The Medical Missionary, Molepolole**, refers to the increase in the average age of prison inmates with the result that complaints from the prisoners were mainly of a geriatric nature. One prisoner died in hospital but the cause was not stated. 318 babies were born in hospital, while 5,178 ante-natal attendances were recorded. Of 2,715 examined for the Rand mines 163 were rejected, i.e. 6%.

122. **The Government Medical Officer, Serowe**, writes of the considerable increase in ante-natal attendances and deliveries at the Government Maternity Centre. In 1953 322 deliveries took place and there were 2,522 ante-natal attendances; during 1954 the corresponding figures were 662 and 4,682 respectively. There is now inadequate accommodation for all cases seeking to be confined in the Centre. In view of the threat of diphtheria, widespread diphtheria prophylaxis was offered and nearly 5,300 inoculations were done. During May to October there was a marked increase in the rodent population, supposedly due to an outbreak of influenza amongst the cats which exterminated a high proportion of the cat population. Anti-rodent measures were consequently intensified. With the threat of malaria following good rains 6,000 huts in Serowe were treated with insecticides and larvicidal measures were also increased.

FINANCE

123. The total revenue from Government hospitals and dispensary fees was £7,437 8s. 3d., as follows:—

Francistown	...	...	...	...	£1,473	10	0
Gaberones	...	...	...	...	311	3	0
Lobatsi	...	...	...	...	1,248	17	9
Mafeking	...	...	...	...	10	0	0
Mahalapye	...	...	...	...	1,034	16	0
Maun	...	...	...	...	1,386	16	3
Serowe	...	...	...	...	1,972	5	3
TOTAL	...	...	...	...	£7,437	8	3

The corresponding figure for 1953 was £6,877.

124. The total ordinary expenditure of the Department for the financial year ended 31st March, 1955, was £91,999, as follows:—

Personal Emoluments	...	...	...	...	£51,426
Travelling Expenses	...	...	...	...	3,126
Maintenance of Vehicles	...	...	...	...	2,935
Camping Equipment	...	...	...	...	150
Maintenance of Patients	...	...	...	...	20,000
Hospital Equipment	...	...	...	...	3,500
Maintenance of Lunatics	...	...	...	...	1,500
Grants to Hospitals and Missions	...	...	...	...	1,957
Uniforms	...	...	...	...	800
Public Health Measures	...	...	...	...	4,000
Miners' Phthisis Patients	...	...	...	...	5
Treatment of Indigent Persons in Union Hospitals	...	...	...	...	50
Maintenance of X-ray Plants	...	...	...	...	500
Expenses of High Commission Territories Nursing Council	...	...	...	...	50
Transport	...	...	...	...	1,850
Maintenance of Abattoirs	...	...	...	...	100
Bicycles	...	...	...	...	50
TOTAL	...	...	...	...	<u>£91,999</u>

125. The total ordinary revenue of the Bechuanaland Protectorate during the period 1953/54 was £908,255. The proportion of ordinary medical expenditure to ordinary revenue of the Protectorate was 10.12%.

126. The total ordinary expenditure of the Bechuanaland Protectorate during the period 1953/54 was £891,700. The proportion of ordinary medical expenditure to ordinary expenditure of the Protectorate was 10.31%.

127. Once more rigid economy had to be maintained in the face of financial stringency. As a result, officers were compelled to suffer some curtailment of their requirements. Nevertheless the need for this was fully appreciated, and it is a pleasure to record the willing co-operation of all in maintaining essential services despite shortages of staff.

M. L. FREEDMAN,
Director of Medical Services.

Return of
DISEASES AND DEATHS
for the year 1954

BECHUANALAND PROTECTORATE.

RETURN OF DISEASES, INJURIES AND CAUSES OF DEATH FOR THE YEAR 1954

OUT-PATIENTS

IN-PATIENTS

DISEASES	†Remaining in Hospital at end of 1953	Yearly Total		‡Total Cases Treated	§ Remaining in Hospital at end of 1954	Male	Female
		Admissions	Deaths				
A.	52	354	28	406	76	543	680
1. Tuberculosis of respiratory system ...	—	7	2	7	1	4	4
2. Tuberculosis of meninges and central nervous system ...	—	8	2	8	5	39	53
3. Tuberculosis of intestines, peritoneum and mesenteric glands ...	8	45	—	53	19	72	60
4. Tuberculosis of bones and joints ...	1	41	—	42	1	157	158
5. Tuberculosis, all other forms ...	—	23	—	23	2	624	792
6. Congenital syphilis ...	1	29	—	30	—	1065	1348
7. Early syphilis ...	1	1	—	2	—	4	8
8. Tabes dorsalis ...	—	2	—	2	—	—	—
9. General paralysis of insane ...	4	56	—	60	—	1700	2609
10. All other syphilis ...	2	94	1	96	1	2463	2808
11. Gonococcal infections ...	—	3	1	3	1	3	1
12. Typhoid fever ...	—	—	—	—	—	—	—
13. Paratyphoid fever and other Salmonella infections ...	—	—	—	—	—	—	—
14. Cholera ...	—	—	—	—	—	—	—
15. Brucellosis (undulant fever) ...	—	—	—	—	—	—	—
16. (a) Bacillary dysentery ...	—	28	2	28	2	160	182
(b) Amoebiasis ...	—	25	2	25	—	51	49
(c) Other unspecified forms of dysentery	—	19	—	19	1	253	336
17. Scarlet fever ...	—	—	—	—	—	1	1
18. Streptococcal sore throat ...	—	114	—	114	—	534	841
19. Erysipelas ...	—	1	—	1	—	1	2
20. Septicaemia and pyaemia ...	—	12	2	12	—	12	8
21. Diphtheria ...	—	44	16	44	2	37	51
22. Whooping cough ...	1	58	5	59	4	563	680
23. Meningococcal infections ...	—	20	7	20	—	18	18
24. Plague ...	—	—	—	—	—	—	—
25. Leprosy ...	1	1	—	2	—	9	9
26. Tetanus ...	—	4	2	4	1	—	1

BECHUANALAND PROTECTORATE.

RETURN OF DISEASES, INJURIES AND CAUSES OF DEATH FOR THE YEAR 1954

DISEASES		IN-PATIENTS			OUT-PATIENTS			
		†Remaining in Hospital at end of 1953	Yearly Total		‡Total Cases Treated	§ Remaining in Hospital at end of 1954	Male	Female
			Admissions	Deaths				
	Brought forward ...	73	1217	73	1290	117	9328	11646
40.	(a) Onchocerciasis ...	—	—	—	—	—	—	—
	(b) Loiasis ...	—	—	—	—	—	—	—
	(c) Filariasis (bancrofti)...	—	1	—	1	—	1	—
	(d) Other filariasis ...	—	—	—	—	—	2	1
41.	Ankylostomiasis ...	—	—	—	—	—	—	—
42.	(a) Tapeworm infestation and other cestode infestations ...	—	24	—	24	—	196	191
	(b) Ascariasis ...	—	4	—	4	—	159	199
	(c) Guinea worm (dracunculosis)	—	—	—	—	—	—	1
	(d) Other disease due to helminths ...	—	—	—	—	—	39	49
43.	(a) Lymphogranuloma venereum ...	1	5	—	6	—	21	7
	(b) Granuloma inguinale, venereal ...	—	4	—	4	—	18	26
	(c) Other and unspecified venereal diseases ...	—	5	—	5	—	22	49
	(d) Foodpoisoning infection and intoxi- cation ...	1	3	—	4	—	7	3
	(e) Relapsing fever ...	—	4	—	4	—	5	—
	(f) Leptospirosis icterohaemorrhagica (Weil's disease)	—	—	—	—	—	—	—
	(g) Yaws ...	—	—	—	—	—	6	9
	(h) Chickenpox ...	—	5	—	5	—	74	97
	(i) Dengue ...	—	—	—	—	—	—	—
	(j) Trachoma ...	—	7	—	7	—	27	45
	(k) Sandfly fever ...	—	3	—	3	—	2	3
	(l) Leishmaniasis ...	—	—	—	—	—	—	—
	(m) a Trypanosomiasis gambiensis ...	—	—	—	—	—	—	—
	b Trypanosomiasis rhodesiensis ...	—	2	—	2	—	—	—
	c Other and unspecified Trypanoso- miasis ...	—	—	—	—	—	—	—

BECHUANALAND PROTECTORATE.

RETURN OF DISEASES, INJURIES AND CAUSES OF DEATH FOR THE YEAR 1954

IN-PATIENTS OUT-PATIENTS

DISEASES	† Remaining in Hospital at end of 1953	Yearly Total		‡ Total Cases Treated	§ Remaining in Hospital at end of 1954	Male	Female
		Admissions	Deaths				
Brought forward ...	81	1659	95	1740	127	13459	17301
(b) Iron deficiency anaemias (hypo- chromic)	—	9	—	9	—	147	312
(c) Other specified and unspecified anaemias	1	4	1	5	—	85	397
66. (a) Asthma	—	65	1	65	—	373	656
(b) All other allergic disorder, endocrine, metabolic and blood diseases ...	2	26	2	28	—	472	379
67. Psychoses	14	11	—	25	21	65	39
68. Psychoneuroses and disorders of per- sonality	1	19	—	20	1	37	123
69. Mental deficiency	—	5	1	5	—	26	16
70. Vascular lesions affecting central nervous system	1	9	—	10	—	10	8
71. Nonmeningococcal meningitis ...	—	15	2	15	—	7	11
72. Multiple sclerosis	—	—	—	—	—	—	—
73. Epilepsy	—	9	—	9	2	70	63
74. Inflammatory diseases of eye ...	4	105	—	109	2	935	1002
75. Cataract	2	11	—	13	1	55	49
76. Glaucoma	—	6	—	6	—	28	50
77. (a) Otitis externa	—	1	—	1	—	126	136
(b) Otitis media and mastoiditis ...	—	47	1	47	—	266	412
(c) Other inflammatory diseases of ear	—	4	—	4	—	231	290
78. (a) All other diseases and conditions of eye	3	29	—	32	—	517	543
(b) All other diseases of the nervous system and sense organs	—	36	2	36	—	535	965
79. Rheumatic fever	3	31	2	34	2	225	208
80. Chronic rheumatic heart disease ...	—	24	1	24	—	47	67
81. Arteriosclerotic and degenerative heart disease	—	21	7	21	1	25	30

82.	Other disease of heart	—	59	5	59	7	276	344
83.	Hypertension with heart disease	1	9	—	10	—	35	11
84.	Hypertension without mention of heart	—	16	—	16	—	35	78
85.	Diseases of arteries	1	10	1	11	—	18	4
86.	Other diseases of circulatory system	2	25	2	27	1	124	125
87.	Acute upper respiratory infections	2	143	—	145	3	2169	2495
88.	Influenza	—	154	—	154	4	1182	1474
89.	Lobar pneumonia	1	184	3	185	3	229	229
90.	Bronchopneumonia	4	289	24	293	3	307	323
91.	Primary atypical, other and unspecified pneumonia	1	80	7	81	1	91	104
92.	Acute bronchitis	1	90	1	91	—	1152	1510
93.	Bronchitis, chronic and unqualified	—	63	—	63	—	1729	1943
94.	Hypertrophy of tonsils and adenoids	—	83	—	83	—	323	628
95.	Empyema and abscess of lung	—	7	—	7	1	4	1
96.	Pleurisy	2	54	—	56	5	104	109
97.	(a) Pneumoconiosis	—	—	—	—	—	14	—
	(b) All other respiratory diseases	—	36	—	36	—	462	486
98.	(a) Dental caries... ..	—	15	—	15	—	727	945
	(b) All other diseases of teeth and supporting structures	2	30	—	32	—	270	365
99.	Ulcer of stomach	—	3	—	3	—	3	4
100.	Ulcer of duodenum	—	—	—	—	—	80	103
101.	Gastritis and duodenitis... ..	—	32	—	32	—	525	598
102.	Appendicitis	4	70	1	74	2	56	73
103.	Intestinal obstruction and hernia	1	38	2	39	—	269	295
104.	(a) Gastro-enteritis and colitis between 4 weeks and 2 years	1	85	5	86	—	1072	1109
	(b) Gastro-enteritis and colitis, ages 2 years and over	4	57	2	61	1	883	994
	(c) Chronic enteritis and ulcerative colitis	—	39	2	39	—	168	236
105.	Cirrhosis of liver... ..	—	11	5	11	1	43	58
106.	Cholelithiasis and cholecystitis	—	8	—	8	—	23	51
107.	Other diseases of digestive system	4	94	—	98	3	2092	3118
108.	Acute nephritis	—	16	1	16	—	170	138
109.	Chronic, other and unspecified nephritis	—	11	1	11	—	54	38
110.	Infections of kidney	—	24	5	24	—	281	230
Total carried forward ...		143	3981	182	4124	192	32711	41276

BECHUANALAND PROTECTORATE.

RETURN OF DISEASES, INJURIES AND CAUSES OF DEATH FOR THE YEAR 1954

DISEASES	IN-PATIENTS				OUT-PATIENTS		
	†Remaining in Hospital at end of 1953	Yearly Total		‡Total Cases Treated	§ Remaining in Hospital at end of 1954	Male	Female
		Admissions	Deaths				
Brought forward ...	143	3981	182	4124	192	32711	41276
111. Calculi of urinary system ...	—	4	—	4	—	15	2
112. Hyperplasia of prostate ...	2	5	1	7	1	15	—
113. Diseases of breast ...	—	18	—	18	1	—	248
114. (a) Hydrocele ...	—	12	—	12	—	42	12
(b) Disorders of menstruation ...	—	55	—	55	1	—	4217
(c) All other disease of the genito-urinary system... ..	5	397	2	402	8	686	3147
115. Sepsis of pregnancy, childbirth and the puerperium ...	1	22	—	23	—	—	16
116. Toxaemias of pregnancy and the puerperium ...	—	21	2	21	—	—	6
117. Haemorrhage of pregnancy and childbirth ...	3	29	—	32	1	—	22
118. Abortion without mention of sepsis or toxæmia ...	2	116	—	118	1	—	187
119. Abortion with sepsis ...	—	24	—	24	—	—	79
120. (a) Other complications of pregnancy, childbirth and the puerperium ...	2	246	12	248	2	—	1036
(b) Delivery without complications ...	22	1650	—	1672	38	—	4883
121. Infections of skin and subcutaneous tissue ...	7	224	—	231	4	2440	3178
122. Arthritis and spondylitis ...	2	30	—	32	1	332	431
123. Muscular rheumatism and rheumatism, unspecified ...	1	75	—	76	2	2057	2306
124. Osteomyelitis and periostitis ...	3	32	—	35	4	86	62
125. Ankylosis and acquired musculoskeletal deformities ...	1	3	—	4	1	24	19
126. (a) Chronic Ulcer of Skin (including tropical ulcer) ...	—	10	—	10	1	109	93

(b) All other diseases of skin ...	1	55	—	56	—	1170	1133
(c) All other diseases of musculoskeletal system...	—	41	—	41	1	258	232
127. Spina bifida and meningocele ...	—	1	—	1	1	—	—
128. Congenital malformations of circulatory system ...	—	—	—	—	—	4	4
129. All other congenital malformations ...	—	12	1	12	—	17	18
130. Birth injuries ...	—	1	1	1	—	1	2
131. Postnatal asphyxia and atelectasis ...	—	18	13	18	—	5	3
132. (a) Diarrhoea of newborn (under 4 weeks)...	—	7	1	7	—	40	52
(b) Ophthalmia neonatorum ...	—	1	—	1	—	2	6
(c) Other infections of newborn ...	—	6	4	6	—	5	5
133. Haemolytic disease of newborn ...	—	6	5	6	—	—	—
134. All other defined diseases of early infancy	3	143	5	146	5	279	368
135. Ill-defined diseases peculiar to early infancy and immaturity, unqualified	—	15	3	15	1	70	84
136. Senility without mention of psychosis ...	—	3	—	3	—	10	29
137. (a) Pyrexia of unknown origin...	6	52	2	58	1	81	77
(b) Observation, without need for further medical care ...	26	1371	—	1397	30	775	3314
(c) All other ill-defined causes of morbidity ...	1	312	—	313	2	1603	1594
Accidents, Poisonings, and Violence							
(External Cause)							
A.E.							
138. Motor vehicle accidents ...	1	28	4	29	1	36	21
139. Other transport accidents ...	8	34	1	42	2	91	34
140. Accidental poisoning ...	—	15	3	15	1	14	18
141. Accidental falls ...	9	196	1	205	4	592	446
142. Accident caused by machinery ...	2	20	—	22	1	50	35
143. Accident caused by fire and explosion of combustible material ...	1	66	6	67	1	367	399
144. Accident caused by hot substance, corrosive liquid, steam and radiation ...	5	61	2	66	4	109	92
145. Accident caused by firearm ...	—	7	—	7	—	6	—
146. Accidental drowning and submersion ...	—	—	—	—	—	1	—
Total carried forward ...	257	9425	251	9682	313	44103	69186

BECHUANALAND PROTECTORATE.

RETURN OF DISEASES, INJURIES AND CAUSES OF DEATH FOR THE YEAR 1954

DISEASES	†Remaining in Hospital at end of 1953	IN-PATIENTS		‡Total Cases Treated	§ Remaining in Hospital at end of 1954	OUT-PATIENTS	
		Yearly Total				Male	Female
		Admissions	Deaths				
Brought forward ...	257	9425	251	9682	313	44103	69186
147. Foreign body entering eye and adnexa	—	18	—	18	2	71	36
Foreign body entering other orifice ...	—	20	1	20	—	54	48
Accidents caused by bites and stings of venomous animals and insects ...	—	46	—	46	2	147	113
Other accidents caused by animals ...	3	54	—	57	—	142	72
All other accidental causes ...	5	179	—	184	7	840	467
148. Suicide and self-inflicted injury... ..	—	13	1	13	1	36	34
149. Homicide and injury purposely inflicted by other persons (not in war) ...	1	115	1	116	4	157	182
150. Injury resulting from operations of war	—	—	—	—	—	—	—
TOTAL ...	266	9870	254	10136	329	45550	70138

TOTAL—115,688

